

DEP & REF Room 307
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE THE APPLICATION OF

Thomas Joseph Moran et al.

SERIAL NO.: 10/091,072

FILED: March 5, 2002

FOR: Use Of Radio Data Service (RDS)
Information To Automatically Access A
Service Provider

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) Group Art Unit No. 2681
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to "Assistant Commissioner of Patents, Washington, D.C. 20231, Box:" on September 3, 2002.

Name of person signing Jennifer J. Ramirez

Signature

**SUPPLEMENT TO PETITION PURSUANT TO 37 C.F.R. § 1.47(a),
REQUEST TO DISMISS PETITION, AND REQUEST FOR REFUND**

Honorable Director of
Patents and Trademarks
Washington, D.C. 20231

Dear Sir:

The assignee has now been successful in obtaining execution of the application by Mr. Enright. An appropriate declaration is appended hereto.

It is therefore requested that the Petition mailed to the Patent and Trademark Office on May 29, 2002 be dismissed, and that this application proceed to examination in the normal course.

Finally, since the Petition is unnecessary, it is requested that the Petition fee of \$130 be returned to the applicant and credited to deposit account number 12-0913. Any questions regarding the refund should be directed to the undersigned.

September 3, 2002

Respectfully submitted,

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DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **USE OF RADIO DATA SERVICE (RDS) INFORMATION TO AUTOMATICALLY ACCESS A SERVICE PROVIDER**, the specification of which:

☒ is attached hereto.

☐ was filed on _____ as

Application Serial No. _____

and was amended on _____ if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119 of any foreign application(s) for patent or inventor's certificate listed below and

**USE OF RADIO DATA SERVICE (RDS) INFORMATION TO AUTOMATICALLY
ACCESS A SERVICE PROVIDER**

FIELD OF THE INVENTION

5 The present invention relates to a method and apparatus for automatically accessing a service provider on the basis of radio data service (RDS) information received from a radio frequency broadcast. The invention is particularly related to but in no way limited to accessing a contact centre using RDS information.

BACKGROUND TO THE INVENTION

10 Radio Data System (RDS) is a method whereby data is broadcast together with FM or VHF radio signals. RDS radio receivers are then able to extract and use that data, which may for example be information about the frequencies of nearby transmitters, the current time and date, text such as the name of the current programme, the title of a record or a phone-in-number, or a code such as a
15 programme type code, (e.g. news, sport, drama). The RDS contains data about the frequencies of nearby transmitters and is able to automatically retune to the strongest signal without the need for action by the user. This is especially useful for car radios which automatically retune themselves when travelling between different transmitter coverage areas.

20 Wireless terminals such as mobile phones which provide cellular communications for example for telephony and short message service (SMS) are well known and more recently such terminals are also able to provide FM radio reception. It is sought to provide a means whereby these two technologies, RDS and wireless terminals with FM radio reception can be advantageously used in
25 conjunction with one another.

One problem with radio programme broadcasts is that listeners often fail to hear all information, for example if the listener is carrying out another task as well as listening, if the reception is poor or if the information is detailed and complex. A particular example of this is when a listener hears a song on the radio but fails to
30 hear the name of the artist or tune when it is announced. Previously, this problem has been addressed by using the RDS system. The broadcaster issues short radio text messages to RDS radio receivers using the RDS system. These

and make a user input indicating that it is required to purchase the song for example.

5 Thus for example, the information about the user input can comprise any of a request for contact, a request for information associated with the RDS information in the message, or a request to order goods associated with the RDS information.

10 In the case that the service provider comprises a contact centre the method preferably comprises the steps of, at the contact centre receiving said message, extracting said RDS information from the message and routing the message to one of a plurality of contact centre agents on the basis of said RDS information. This provides the advantage that the customer is automatically routed to an appropriate call centre agent which a skill-set suited to the requirements of the customer, as judged on the basis of at least the RDS information. This is advantageous for the end user who does not need to navigate a complex menu system or other user interface at the call centre. There are also advantages from the point of view of the call centre provider, because the load on the call centre routing system is reduced and the overall transaction time reduced.

20 In one example the RDS information extracted from the message comprises information about the origination of the RDS information and wherein that information is stored. This information can be used advantageously, for example, for marketing purposes and may comprise time information. Thus service providers are able to assess the most effective times and radio stations from which RDS information is broadcast.

30 The invention also encompasses a user terminal arranged to automatically access a service provider on the basis of radio data service (RDS) information provided in a pre-specified template format and received from a radio frequency broadcast said user terminal comprising:

- an RDS radio receiver arranged to receive said radio frequency broadcast and to extract said RDS information on the basis of said pre-specified template format;
- 35 • a processor arranged to create a message on the basis of at least some of said RDS information; and

universal resource locator (URL) for the particular web-site involved. Alternatively, the address information may comprise a fax number or a telephone number.

5 When the service provider receives the message it either has direct access to RDS information in that message, or it has indirect access to RDS information as explained below. Any resulting transaction that occurs between the user and the service provider is thereby speeded up and simplified because the user is automatically connected to the service provider without the need for complex actions by the user.

10 The service provider may have indirect access to RDS information as now explained. For example, the radio broadcast RDS information comprises a particular telephone number for a service provider. That telephone number is extracted by the user terminal and used to place a call to the service provider. Because that service provider has several different telephone numbers it is able
15 to tell that all calls made to one particular one of its telephone numbers should be dealt with in a particular manner. For example, all such calls could be related to a particular advert broadcast on the radio. In this case, a call set up request made to the particular telephone number of the service provider comprises RDS information indirectly because it is made to the particular telephone number.

20 In a preferred embodiment the RDS data broadcast by the radio frequency broadcaster 10 is provided according to a specified format. The RDS data is contained in a template structure such as that illustrated in Figure 3. This shows three sections of RDS data, each no larger than a specified maximum size and arranged in series as illustrated in Figure 3. In the example illustrated in Figure 3
25 the RDS template comprises a first field 32 of specified size, which is arranged to hold address details for the service provider. A second field 31 is arranged to hold information about the identity of the song, advert or other broadcast item. Finally a third field 30 holds information about the identity of a radio station which broadcast the RDS information. By using a specified template structure for the
30 RDS data, this data is easier to extract from the radio frequency broadcast and is also in a suitable form for further use by the service provider.

In a particularly preferred embodiment the service provider is a contact centre, where a "contact centre" is an entity arranged to receive queries from users and to respond to those queries. For example, a telephone help desk, a telephone
35 ticket sales agency or a web-based music sales service. A contact centre has a plurality of contact centre agents which are arranged to formulate and send

CLAIMS

1. A method of automatically accessing a service provider on the basis of radio data service (RDS) information provided in a pre-specified template format and received from a radio frequency broadcast said method comprising the steps of:

- (i) receiving said radio frequency broadcast using an RDS radio receiver and extracting said RDS information on the basis of said pre-specified template format;
- (ii) creating a message on the basis of at least some of said RDS information;
- (iii) sending said message to the service provider using either a pre-specified address or an address provided in the RDS information.

2. A method as claimed in claim 1 wherein said service provider comprises a contact centre.

3. A method as claimed in claim 1 wherein said message is sent to the service provider using a medium selected from: email, telephone and short message service.

4. A method as claimed in claim 3 wherein said medium is provided using any of wireless application protocol (WAP), general packet radio service (GPRS) and third generation (3G) communications.

5. A method as claimed in claim 1 wherein said RDS information comprises an identifier which identifies a radio station which provided the radio frequency broadcast.

6. A method as claimed in claim 1 wherein said RDS information comprises an identifier associated with audio information provided by said radio frequency broadcast.

7. A method as claimed in claim 6 wherein said identifier is associated with any one of a piece of music, an artist, an enterprise, or an advertisement.

8. A method as claimed in claim 1 wherein said step (i) of receiving further comprises presenting at least some of said extracted RDS information to a user

15. A user terminal as claimed in claim 10 which is selected from: a mobile telephone, a personal computer, a personal digital assistant and a lap-top computer.

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16. A contact centre comprising at least one input arranged to receive messages comprising RDS information, a plurality of contact centre agents and a router arranged to route messages from the input to the contact centre agents and wherein said contact centre further comprises a processor arranged to
10 extract RDS information from the messages and wherein said router is arranged to route said messages to the contact centre agents at least partly on the basis of the extracted RDS information.

17. A contact centre as claimed in claim 16 which further comprises a database and wherein said RDS information extracted from the message comprises
15 information about the origination of the RDS information and this information is stored in the database.

18. A communications network comprising a contact centre as claimed in claim
20 16.

19. A computer program arranged to control a contact centre as claimed in claim 16 such that the following steps are performed:

- 25
- (i) messages comprising RDS information are received;
 - (ii) RDS information is extracted from the received messages;
 - (iii) the messages are routed to the contact centre agents at least partly on the basis of the extracted RDS information.

20. A computer program as claimed in claim 19 which is stored on a computer
30 readable medium.

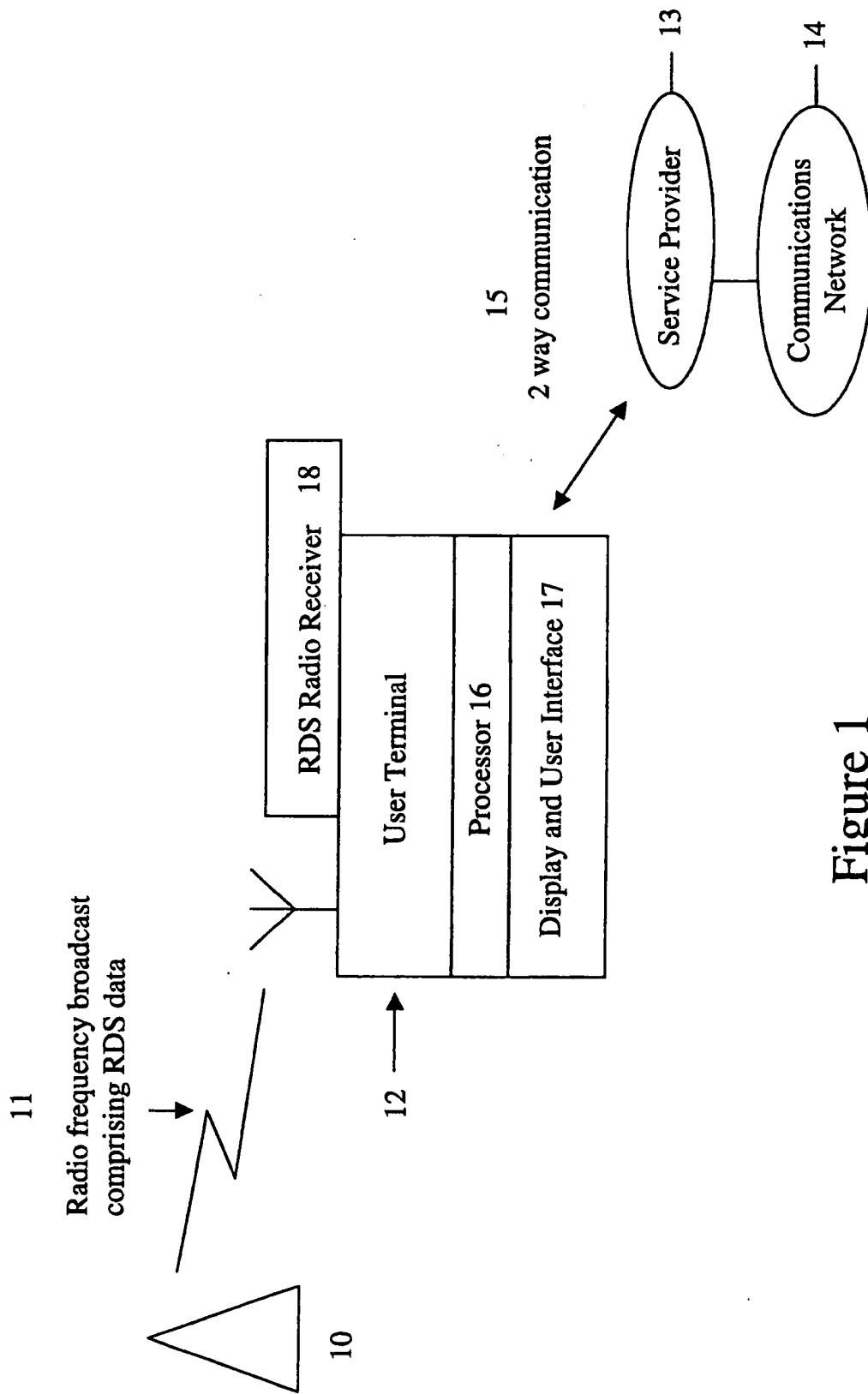


Figure 1

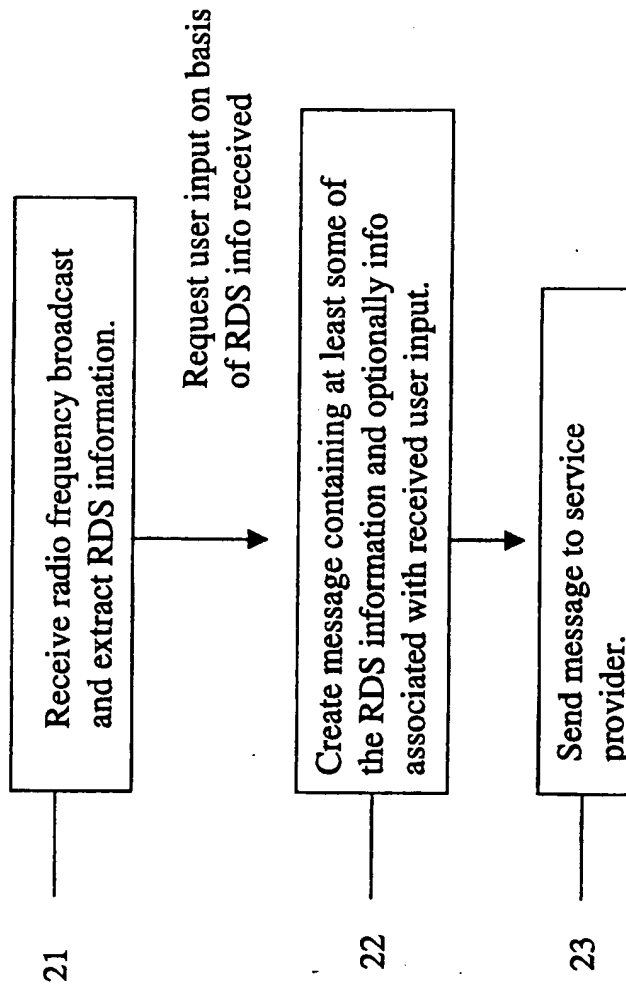


Figure 2

30

Identity of radio station

31

Identity of broadcast item (e.g. song, advert)

32

URL or other address information of service provider

Template format for RDS Data

Figure 3



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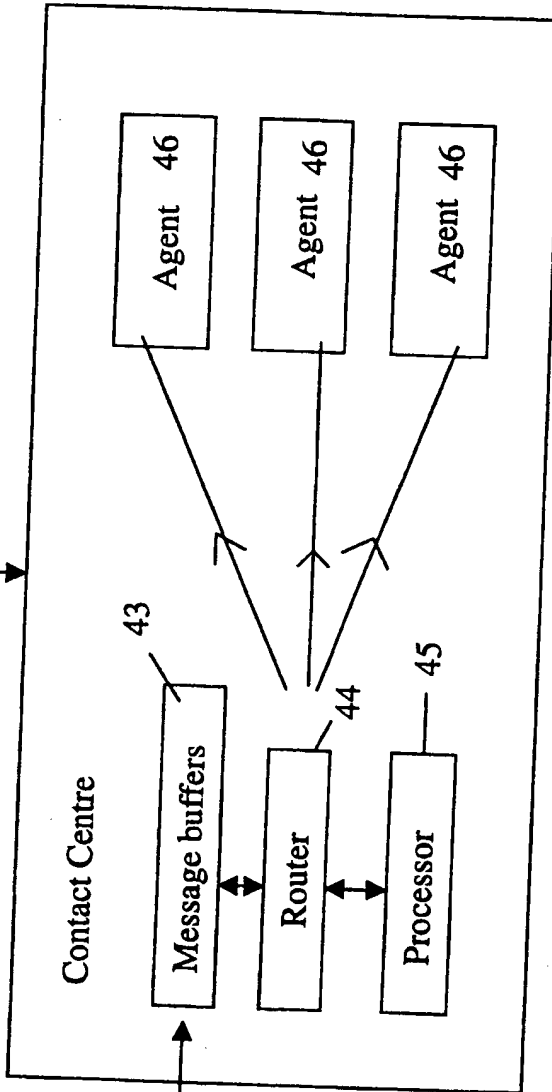


Figure 4



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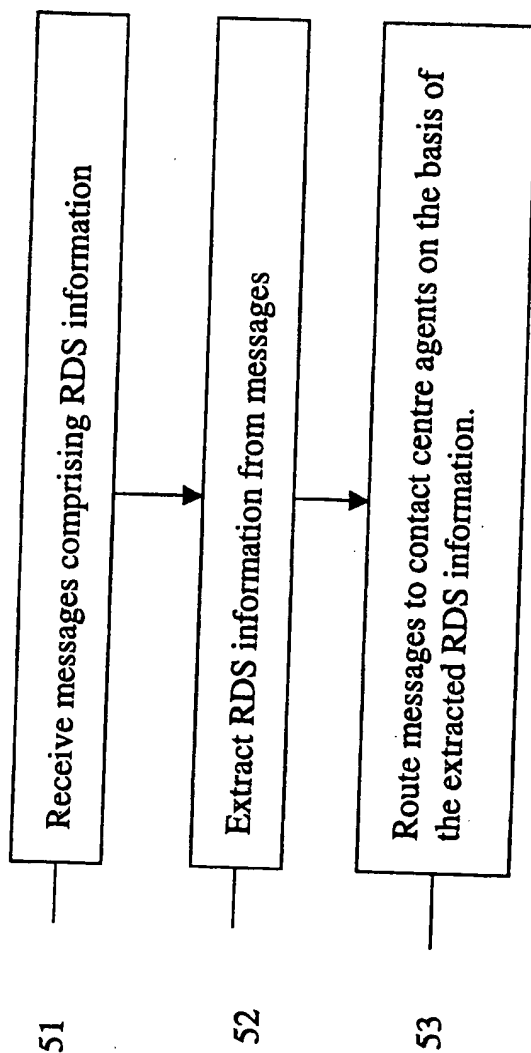


Figure 5